REMARKS

Claims 1-6, 8-9, 13, 15-16, and 19-20 all the claims pending in the application, stand rejected on prior art grounds. Claims 1, 2, 3, 5, 6, 8, 13, 15, 16, 19, and 20 are amended herein. Applicants respectfully traverse the rejections of the claims based on the following discussion.

1.   The Prior Art Rejections

Claims 1-3, 5-6, 9, 13, 15-16 and 19-20 stand rejected under 35 U.S.C. ' 102(e) as being anticipated by Abrams, et al. (U.S. Publication No. 2002/0166117A1), hereinafter referred to as "Abrams". Claim 4 stands rejected under 35 U.S.C. ' 103(a) as being unpatentable over Abrams, in view of Microsoft Computer Dictionary Published in 1997, hereinafter referred to as "Microsoft". Applicants respectfully traverse these rejections based on the following discussion.

Abrams provides on-demand, scalable computational resources to application providers over a distributed network and system. Resources are made available based on demand for applications. Application providers are charged fees based on the amount of resources utilized to satisfy the needs of the application. In providing computer resources, the method and apparatus is capable of rapidly activating a plurality of instances of the applications as demand increases and to halt instances as demand drops. Application providers are charged based on metered amount of computational resources utilized in processing their applications. Application providers access the network to distribute applications onto network to utilize distributed compute resources for processing of the applications. Application providers are further capable of monitoring, updating, and replacing distributed applications. The apparatus and system includes plurality of computing resources distributed across a network capable of restoring and snapshotting provisioned applications based on demand.

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The notion of the virtual server described by Abrams is different from the Applicants' invention. Abrams deals with starting and stopping of application instances depending upon the usage. The virtual server in Abrams is a set of physical servers serving an application for one customer. Whereas, the virtual server provided by the Applicants' invention is defined as a multi-tiered application, which can include multiple instances of each tier (i.e., resource classes). For a customer, the Applicants' invention's virtual server can have multiple instances of a resource class each of which can be hosted on a machine fraction. Thus, the Applicants' invention can allocate a fraction of a machine capacity for each resource class instance and can control/limit usage of resources by that instance which is not the case in Abrams. Accordingly, reference in made to the definition of "virtual server" on page 6 of the specification, as originally filed.

Abrams uses appshot as a technique to increase and decrease the application capacity in response to changing load. Conversely, the Applicants' invention provides hit-weights to control the allocation of resources in a fine-grained manner. Reference is made to "Aggregator" on page 22 of the specification, as originally filed, for details of hit-weights.

Furthermore, Abrams brings down the resource requirements of the service provider to satisfy various customers by shifting resources from one customer to another as and when required. This occurs based on the assumption that the peak load of different customers occur at different times. Conversely, the Applicants' invention achieves that and goes one step further by optimizing the service provider's revenue in cases where multiple customers' peak occur at the same time and hence require more resources than available with the provider. Reference is made to the "Global Decision Maker" on page 29 of the specification, as originally filed.

The method to handle incoming requests used by Abrams directs all the requests to a

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single application instance. This is continued until that instance becomes overloaded based on the thresholds defined. Then, the appshot technique is used to start a new instance of the application for handling new incoming requests. Application instances are freed up when the usage goes down below a threshold. Conversely, the Applicants' invention allocates resources to customers based on current load and past usage history (i.e., changed number of application instances of one or more resource class components). While handling the actual incoming request the load distributor component does the following: The client of an incoming hit is identified, followed by a decision as to which subfarm application instance has enough allocated capacity allocated for the client to be able to handle the hit. This is followed by the hit being forwarded to the application. If no allocated spare capacity exists for the hit, then the hit is either dropped, or queued for delayed processing. Reference is made to the "Load Distributor" on page 14 of the specification, as originally filed.

In Abrams, a customer specifies his requirements in terms of actual physical resource usage like CPU, memory, etc.; conversely, in the Applicants' invention the customer specifies his requirements at the business/application level (e.g., minimum and maximum number of hits to the retail stores per minute). It is then mapped to actual application instances required. Moreover, the claimed invention then dynamically allocates application level resources in accordance with the requirements.

The charging for usage in Abrams is based on the actual hardware resources consumed. Conversely, in the Applicants' invention, a customer is charged based on the number of hits to the virtual server. Moreover, in Applicants' invention, the usage can be specified in terms of the number of hits which is a user-friendly parameter as compared to physical resource consumption as used by Abrams. Furthermore, this parameter is more easily auditable as compared to

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resource consumption used by Abrams.

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections.
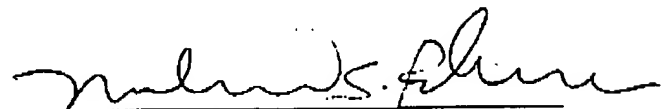
II. Formal Matters and Conclusion

In view of the foregoing, Applicants submit that claims 1-6, 8-9, 13, 15-16, 19, and 20, all the claims presently pending in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary. Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 09-0441.

Respectfully submitted,

Dated: August 3, 2005

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